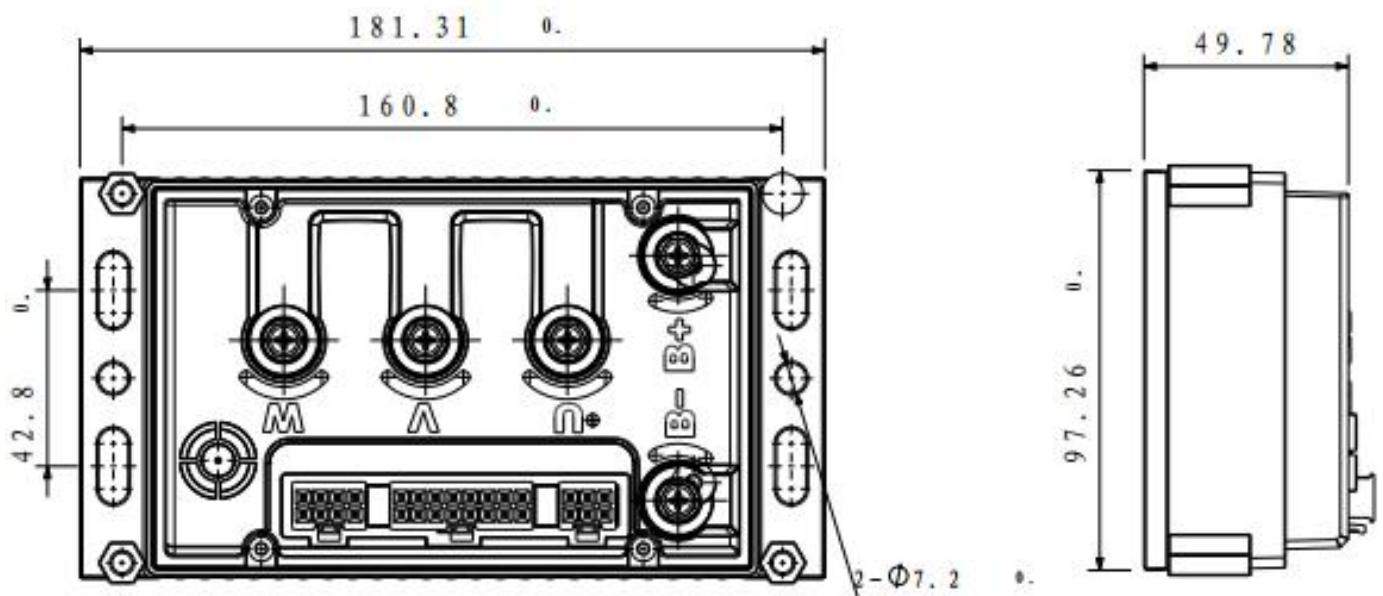




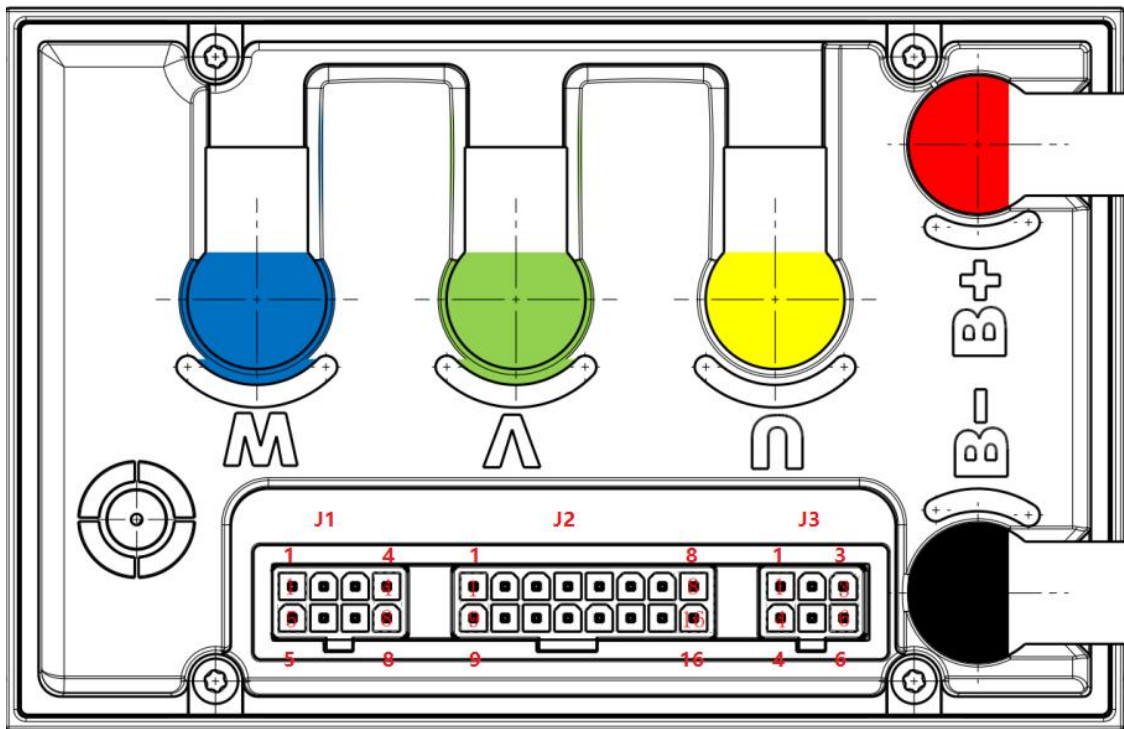
- IP66
- Input Voltage 36~88V
- Non-Isolated Type
- Built-in 6-Axis Gyroscope Optional
- Built-in Bluetooth Optional

■ Dimensions & Installation Instructions



Terminal screws: M5×12 (tightening torque 5~7 N • m)

■ Wiring Definitions



Connector (Zhente): ZT2247-B/6+16+8 (30pin) / 5557 socket

8PIN (J1) 5557				6PIN Hall / 6PIN Magnetic Encoder (J3) 5557			
1 CANL	2 CANH	3 IO8	4 5V	1 HALL+	2 TEMPM	3 GND	
5 KEY	6 IO6	7 AD3	8 GND	4 HALLA/A	5 HALLB/B	6 HALLC/Z	
16PIN (J2) 5557							
1 DC+	2 LSD1/SIF	3 IO5	4 IO3	5 IO2	6 RXD/485B	7 VSO	8 IO1
9 LSD2	10 AD1	11 IO7	12 AD2	13 IO4	14 5V	15 GND	16 TXD/485A

- When gear jog control is used, it is connected to J2-4 by default.
- The high brake signal is active at 4V by default. For water-crossing operation, wire it active-low or shield the high brake signal; otherwise the vehicle may enter the braking state if the harness gets wet.
- A throttle that outputs 0V with the ground line disconnected is recommended for safety and throttle sensitivity.

■ **Technical Specifications**

Model	DEMCTA1211	DEMCTA1212	DEMCTB1210	DEMCTB1211
Rated Input Voltage (DC-V)	36~72			
Rated Input Current (DC-A)	30			
Rated Output Current (AC-A@30min)	45			
Input Voltage Range (DC-V)	36~88			
Maximum Input Current (DC-A, 120s)	80			
Maximum Output Current (AC-A@10s)	260			
Operating Ambient Temperature (°C)	-20~+65			
Motor Type	PMSM / SynRM / Induction Motor			
Motor Control Method	FOC/MTPA/SVPWM/Flux Weakening			
Motor Sensor Type	HALL ABC	Mag-Enc ABZ	HALL ABC	Mag-Enc ABZ
6-Axis Gyroscope	None		Yes	
Bluetooth	Yes		Yes	
Efficiency	97%			
Protection	OverCurrent / OverVoltage / OverTemperature / Stall			
Dimensions (mm)	180*96*51			
Weight (kg)	<1.2			
Communication	CAN2.0 / 1-Wire / 485			
Cooling Method	Forced Air Cooling			
Protection Rating	IP66			

■ Pin Descriptions

Pin	Name	Type	Operating Range	Description
J1-1	CANL	Communication	Withstand voltage 40V	Voltage difference between CANH and CANL < 5.5V
J1-2	CANH	Communication	Withstand voltage 40V	Voltage difference between CANH and CANL < 5.5V
J1-3	IO8	Digital Input	0~16V	Low brake / kickstand
J1-4	5V	Power Output	4.3~4.7V 0.05A	Throttle+/accelerator 5V (ACC+)
J1-5	KEY	Power Wake-up Input	30~88V, consumption <0.01A	Key switch / key power
J1-6	IO6	Digital Input	0~16V	High brake, active high
J1-7	AD3	Analog Input	Withstand voltage 5V	Accelerator/throttle signal input
J1-8	GND	Ground	Current capability 2A	Throttle GND
J2-1	DC+	Power Output	<0.1A	Same voltage as terminal + internally
J2-2	LSD1	LSD Output	72V 0.5A	LSD1 low-side driver
	SIF	SIF Output	0~5V	1-Wire instrument
J2-3	IO5	Digital Input	Withstand voltage 88V	Low speed; active low <0.3V, active high >3V or open
J2-4	IO3	Digital Input	Withstand voltage 88V	High speed; active low <0.3V, active high >3V or open
J2-5	IO2	Digital Input	Withstand voltage 88V	Cruise; active low <0.3V, active high >3V or open
J2-6	RXD/485B	TTL serial receive	Active low <0.3V Input impedance 49K Active high >3V	Communication
J2-7	VSO	Output	0.009A	Wheel rotation signal, connected to W phase
J2-8	IO1	Digital Input	Withstand voltage 88V	Anti-theft signal; active low <0.3V, active high >3V or open
J2-9	LSD2	LSD Output	72V 0.5A	Low-side driver; can be optionally used for external relay control
J2-10	AD1	Analog Input	Withstand voltage 40V AD sampling range 0~5V	Unavailable when Bluetooth is built in
J2-11	IO7	Digital Input	Withstand voltage 88V	P gear; active low <0.3V, active high >3V or open
J2-12	AD2	Analog Input	Withstand voltage 40V AD sampling range 0~5V	Unavailable when Bluetooth is built in
J2-13	IO4	Digital Input	Withstand voltage 88V	R gear; active low <0.3V, active high >3V or open
J2-14	5V	Power Output	4.8~5.1V 0.08A	External power supply

J2-15	GND	Ground	Current capability 2A	Connected to terminal -
J2-16	TXD/485A	TTL communication output	Low-level output <0.2V Output impedance 16K High-level output >3.1V	Communication
J3-1	HALL+	Power Output	4.5~5V 0.1A	Encoder power supply (magnetic encoder version)
J3-2	TEMPM	Analog Input	Resistive load only	Motor temperature port (magnetic encoder version)
J3-3	GND	Ground	Current capability 2A	Encoder GND (magnetic encoder version)
J3-4	HALLA	Signal Input	0~5V	Hall A
	A	Signal Input	0~5V	Mag-Enc A
J3-5	HALLB	Signal Input	0~5V	Hall B
	B	Signal Input	0~5V	Mag-Enc B
J3-6	HALLC	Signal Input	0~5V	Hall C/Z
	Z	Signal Input	0~5V	Mag-Enc Z

■ Product Features

- High-power MOSFETs with high current rating, low internal resistance and fast switching speed are used as the power devices.
- An advanced vector control algorithm provides precise control of motor torque and speed.
- Energy regenerative control extends vehicle driving range and meets the needs of different customers.
- Optional anti-rollback function on slopes improves driving safety.
- Built-in 6-axis gyroscope enables wheelie control.
- Built-in Bluetooth enables commissioning and upgrades via mobile phone.
- Software can be customized to meet the different requirements of individual customers.
- OBD function included.

■ Important Notes

- Always tighten the terminal screws to the required torque.
- The vehicle must be equipped with reliable short-circuit protection such as circuit breakers and fuses.